

Draft.

SALMON HATCHERIES.

Extent of Operations.

In 1917 fish-cultural operations were conducted at six hatcheries in Alaska -- two Government stations and four private hatcheries. At one of the latter, Klawak, only the fry hatched from eggs taken in 1916 were distributed as the North Pacific Trading & Packing Company was unable to procure a competent superintendent to carry on the work during the egg taking season of 1917. Two sub-stations at Seal Bay and Uganik were operated under the Afognak hatchery. The annual capacity of all hatcheries in Alaska is approximately 303,000,000 red-salmon eggs, of which the two Government hatcheries can handle 150,000,000. 6

In 1916 the aggregate take of red or sockeye salmon eggs in Alaska was 171,576,000. ~~This was stated in the 1916 report as 171,566,000, due to an error in the report of~~ The number of red or sockeye salmon liberated in Alaskan waters in the season

of 1916-17 was ⁵⁶⁴156,684,000, as compared with 142,964,140 in the previous season.

The take of red salmon eggs in 1917 totaled ⁹⁶⁴115,382,000, or ^{55,602,000}~~56,184,000~~ less than in 1916. This great decrease is due in part to the closure of the Karluk

hatchery and the failure ~~of~~ to take any eggs at Klawak, but results principally from the smaller take of eggs at Fortmann hatchery, where only 6,840,000 were taken as compared with 62,580,000 in 1916. Yes Bay and Quadra hatcheries obtained slightly smaller takes of eggs than in 1916, and Hetta secured a slightly larger number. The take at Afognak was approximately three times as large as in 1916. Collections of humpback eggs were made at Uganik and Seal Bay, which were transferred to Afognak.

one of the superintendents of station.

Operations of Alaska Hatcheries in 1917.

Stations	Red or sock-eye salmon eggs taken in 1916.	Red or sock-eye salmon liberated in 1916-17.	Red or sock-eye salmon eggs taken in 1917.
Yes Bay	58,000,000	^a 51,975,000	34,950,000
Afognak	17,044,000 17,554,000	^c 21,356,000	^d 53,036,000
Uganik	692,000	-----	e-----
Seal Bay	4,678,000	-----	^f 2,712,000
Karluk	1,016,000	-----	-----
Fortmann	62,580,000	57,405,000	^g 6,840,000
Quadra	16,125,000	15,003,000	13,600,000
Hetta	3,271,000	3,120,000	^h 4,244,000
Klawak	8,160,000	7,828,000	-----
Total	171,576,000 6	156,384,000 5,641	115,382,000 964

^a ~~includes~~ 2,000,000 eyed eggs were transferred to the Bonneville, Oreg. hatchery in October, 1916.

^b ~~Incorrectly reported as 17,044,000 in the 1916 statistics. 300,000 humpback-eggs-were-also-taken.~~

^c Includes young salmon resulting from eggs received from Uganik, Seal Bay, and Karluk.

^d 300,000 humpback salmon eggs were also taken.

^e ~~No-eggs-were-taken-at-Klawak-in-1917.~~

^f 1,273,000 humpback salmon eggs were taken.

^g 2,560,000 " " " " "

^h 2,400,000 " " " " "

ⁱ No eggs were taken at Klawak in 1917.

171.566.
115.964.000
55.602.

Hatchery Rebates.

Operators of private hatcheries in Alaska are allowed a rebate of 40 cents for every thousand red or king salmon fry released. This is the equivalent of the Federal Government license tax on 10 cases of canned salmon. Recommendations have been made to Congress that this system be discontinued and that all hatcheries in Alaska be operated by the Government. It is required by law that operators of private hatcheries in Alaska make affidavit of the number of salmon fry released in each fiscal year ended June 30, The following table shows the rebates due for the fiscal year ending June 30, 1917:

Rebates Credited to Private Salmon Hatcheries during the fiscal year ended June 30, 1917.^a

Owners.	Location	Red salmon fry liberated.	Rebate due.
Alaska Packers Association	Naha Stream	57,405,000	\$22,962.00
Northwestern Fisheries Co.	Quadra Lake	15,003,000	6,001.20
Do	Hetta Lake	3,120,000	1,248.00
North Pacific Tr. & Pkg. Co.	Klawak Lake	7,825,000	3,130.00
Total		83,353,000	33,341.20

^a In the case of hatcheries where the seasonal distribution of fry is not completed before July 1, the remaining fry are shown in the subsequent fiscal year's report.

Hatchery Inspection.

Inspections of the operations of private hatcheries were conducted as usual by the representatives of the Bureau.

Hatchery Operations.

Yes Bay.

Between September 1 and October 2, 1916, when egg taking ceased at Yes Bay, a total of 58,000,000 red salmon eggs were secured. In October 2,000,000 eyed eggs were transferred to the Bonneville, Oregon, hatchery. Hatching was completed on April 15, 1917. A total of 49,600,000 fry and ~~3,375,000~~ ⁷⁵ 1,580,000 fingerlings were planted in Yes River, Hatchery Creek, and Lake McDonald. The loss of eggs and fry at Yes Bay was ^{was 4,691,000, fry 129,000, and fingerlings 5,000, a total} ~~4,025,000~~ ⁸, or ^{loss at} ~~8-1/3~~ ^{Yes Bay} per cent. On account of inadequate facilities for holding fry ^{of} to the swimming stage, the greater portion was liberated in the sac stage. Feeding on salt salmon began in June and continued until the supply was used up.

Egg taking in 1917 began on September 11 and ended September 26. During that period 34,950,000 red salmon eggs were taken.

The usual patrol of Yes Bay waters was maintained.

Afognak.

In 1916 the take of red salmon eggs at Afognak was 17,044,000. This collection was augmented by the transfer of 681,000 eyed eggs from Uganik, 4,600,000 from Seal Bay, and 1,016,000 from Karluk. From this number there were planted in the period from October, 1916, to July, 1917, 10,956,000 fry and 10,160,000 red salmon fingerlings, a total of 21,116,000 young salmon. The loss of eggs and fry was 2,225,000, or approximately $9\frac{1}{2}$ per cent.

Hatchery Inspection.

Inspections of the operations of private hatcheries were conducted as usual by the representatives of the Bureau.

HATCHERY OPERATIONS.

Yes Bay.

Between September 1 and October 2, 1916, when egg taking ceased at Yes Bay, a total of 58,000,000 red-salmon eggs were secured. In October 2,000,000 eyed eggs were transferred to the Bonneville, Oregon, hatchery. Hatching was completed on April 15, 1917. A total of 49,600,000 fry and ^{1,575,000}~~2,375,000~~ fingerlings were planted in Yes River, Hatchery Creek, and Lake McDonald. The loss of eggs and fry at Yes Bay was 4,025,000, or ⁸~~7~~ per cent. On account of inadequate facilities for holding fry to the swimming stage, the greater portion was liberated in the sac stage. Feeding on salt salmon began in June and continued until the supply was used up.

Totals did not check out

Egg taking in 1917 began on September 11 and ended September 26. During that period 34,950,000 red-salmon eggs were taken.

The usual patrol of Yes Bay waters was maintained.

Afognak.

In 1916, the take of red-salmon eggs at Afognak was ^{17,054,000}~~17,044,000~~. Through ~~an error in the superintendent's reports this was entered as 17,044,000 in the 1916 report of Alaska Fisheries and Fur Industries.~~ This collection was augmented by the transfer of 681,000 eyed eggs from Uganik, 4,600,000 from Seal Bay, and 1,016,000 from Karluk. From this number there were planted in the period from October, 1916, to July, 1917, 10,956,000 fry and 10,160,000

yes Bay.

Losses Eggs & fry
as shown by
monthly uplts.

58,000,000
51,309,000

6,691,000
2,000,000

4,691,000 Loss of egg

1916	Eggs
Sept.	1,000
Oct.	3,675,000
Nov.	655,000
Dec.	126,000
Jan. 1917	148,000
Feb.	45,000
March	35,000
Apr.	6,000
	<hr/> 4,691,000

1917	Fry
Dec.	1,500 fm
Jan. 1918	16,000 "
Feb.	48,000 "
March	30,000 "
Apr.	20,000
May	8,000
June	5,500
	<hr/> 129,000

Losses

Egg ----- 4,691,000
Fry ----- 129,000
Fingerlings ----- 5,000

4,825,000

Eggs taken Sept. 1916. ----- 58,000,000
Eggs shipped ----- 2,000,000
Eggs lost ----- 4,691,000
Fry lost ----- 129,000
Fry planted ----- 49,600,000
Fingerlings planted ----- 1,575,000
Fingerlings lost ----- 5,000

58,000,000

2 Afognak
DEPARTMENT OF COMMERCE

53,036,000 red salmon eggs
were taken

In Sept and October, 1917,
there were planted ~~3,512,000~~ ^{2,712,000}
eyed eggs

In 1916 the first humpback
eggs were ~~planted~~ taken on Sept

to these were added 2,712,000
eggs taken at Seal Bay substation

1st. During the period ending
Sept 8, 300,000 eggs were taken
this lake was augmented by
2,560,000 from Seal Bay and 1,273,000
from Ugavik substation

No. 204
Ed. 5-15-16-500,000

Ugavik
DEPARTMENT OF COMMERCE

Shipments of eyed eggs were
made in October as follows:

4,096,000 to Pelly Brook
4,106,752 " Green Lake
41,000 " " " " " " " " " " " "
2,000,000 " " " " " " " " " " " "
2,000,000 " " " " " " " " " " " "
total of 16,202,752 a

In October 800,000 ^{humpback} eggs
were planted in Seal Bay.

Ugavik.

In 1917 ^{no red salmon eggs} there were collected
but 1,273,000 humpback eggs were taken
between from Aug 14 to Sept 16.
used to make up shipment to states.

No. 204
Ed. 5-15-16-500,000

~~Ugavik~~
DEPARTMENT OF COMMERCE

Seal Bay.

In 1917 the taking of red salmon
eggs began Aug 8 and ended
Aug. 29, a total of 2,712,000 being
secured. Humpback eggs to the
number of 2,560,000 were secured
from Aug. 24 to Sept. 14.

These eggs were all transferred
to the Afognak Station.

No. 204
Ed. 5-15-16-500,000

Fortmanor.
DEPARTMENT OF COMMERCE

The Fortmanor hatchery is operated on Haskman Lake, near Loring Alaska by the Alaska P.R.

This is the largest hatchery in Alaska having a capacity of approximately 110,000,000 red salmon eggs.

The take ^{of eggs in 1917} ~~the year~~ is the smallest since the beginning of operations in 1901, only

6,840,000 egg taking secured. This

small take is due in great measure to the excessive rainfall, over 100. inches

between July 1 and Nov 30, which made it ^{almost} impossible to take the

spawning fish. ^{Egg taking} Operations extended from Sept 3 to Oct 20.

~~From~~ ^{red oal} the 62,580,000 ^{egg} taken in 1916 then were planted

N.

DEPARTMENT OF COMMERCE

57,405,000 fry. The loss was 5,175,000, or 8.27 percent.

from Sept 3 to Oct 9.

In 1917 2,400,000 humpback salmon eggs were taken ~~for~~ for experimental purposes.

Quadra,

This hatchery is located at Quadra, in B.C. Alaska, and is owned and operated by the N.W. F. Co. Its capacity is about 21,000,000 red sp. In 1916 the taking of eggs began Aug. 9 and ended Nov. 19. The take was 16,125,000. ~~From these~~ Between Nov. 27¹⁶ and June 30, 17, there were lib. 15,003,000 red sp. The loss was 1,122,000 eggs, or 6.9 percent.

3/ In ~~the season~~ 1917 the taking of eggs began August 13 ~~1917~~ and ended Nov 3. ~~1917~~ The total take was 13,600,000. ^{con l.} ² report to come.

Netta.

0-6 of 2-10-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043-1044-1045-1046-1047-1048-1049-1050-1051-1052-1053-1054-1055-1056-1057-1058-1059-1060-1061-1062-1063-1064-1065-1066-1067-1068-1069-1070-1071-1072-1073-1074-1075-1076-1077-1078-1079-1080-1081-1082-1083-1084-1085-1086-1087-1088-1089-1090-1091-1092-1093-1094-1095-1096-1097-1098-1099-1100-1101-1102-1103-1104-1105-1106-1107-1108-1109-1110-1111-1112-1113-1114-1115-1116-1117-1118-1119-1120-1121-1122-1123-1124-1125-1126-1127-1128-1129-1130-1131-1132-1133-1134-1135-1136-1137-1138-1139-1140-1141-1142-1143-1144-1145-1146-1147-1148-1149-1150-1151-1152-1153-1154-1155-1156-1157-1158-1159-1160-1161-1162-1163-1164-1165-1166-1167-1168-1169-1170-1171-1172-1173-1174-1175-1176-1177-1178-1179-1180-1181-1182-1183-1184-1185-1186-1187-1188-1189-1190-1191-1192-1193-1194-1195-1196-1197-1198-1199-1200-1201-1202-1203-1204-1205-1206-1207-1208-1209-1210-1211-1212-1213-1214-1215-1216-1217-1218-1219-1220-1221-1222-1223-1224-1225-1226-1227-1228-1229-1230-1231-1232-1233-1234-1235-1236-1237-1238-1239-1240-1241-1242-1243-1244-1245-1246-1247-1248-1249-1250-1251-1252-1253-1254-1255-1256-1257-1258-1259-1260-1261-1262-1263-1264-1265-1266-1267-1268-1269-1270-1271-1272-1273-1274-1275-1276-1277-1278-1279-1280-1281-1282-1283-1284-1285-1286-1287-1288-1289-1290-1291-1292-1293-1294-1295-1296-1297-1298-1299-1300-1301-1302-1303-1304-1305-1306-1307-1308-1309-1310-1311-1312-1313-1314-1315-1316-1317-1318-1319-1320-1321-1322-1323-1324-1325-1326-1327-1328-1329-1330-1331-1332-1333-1334-1335-1336-1337-1338-1339-1340-1341-1342-1343-1344-1345-1346-1347-1348-1349-1350-1351-1352-1353-1354-1355-1356-1357-1358-1359-1360-1361-1362-1363-1364-1365-1366-1367-1368-1369-1370-1371-1372-1373-1374-1375-1376-1377-1378-1379-1380-1381-1382-1383-1384-1385-1386-1387-1388-1389-1390-1391-1392-1393-1394-1395-1396-1397-1398-1399-1400-1401-1402-1403-1404-1405-1406-1407-1408-1409-1410-1411-1412-1413-1414-1415-1416-1417-1418-1419-1420-1421-1422-1423-1424-1425-1426-1427-1428-1429-1430-1431-1432-1433-1434-1435-1436-1437-1438-1439-1440-1441-1442-1443-1444-1445-1446-1447-1448-1449-1450-1451-1452-1453-1454-1455-1456-1457-1458-1459-1460-1461-1462-1463-1464-1465-1466-1467-1468-1469-1470-1471-1472-1473-1474-1475-1476-1477-1478-1479-1480-1481-1482-1483-1484-1485-1486-1487-1488-1489-1490-1491-1492-1493-1494-1495-1496-1497-1498-1499-1500-1501-1502-1503-1504-1505-1506-1507-1508-1509-1510-1511-1512-1513-1514-1515-1516-1517-1518-1519-1520-1521-1522-1523-1524-1525-1526-1527-1528-1529-1530-1531-1532-1533-1534-1535-1536-1537-1538-1539-1540-1541-1542-1543-1544-1545-1546-1547-1548-1549-1550-1551-1552-1553-1554-1555-1556-1557-1558-1559-1560-1561-1562-1563-1564-1565-1566-1567-1568-1569-1570-1571-1572-1573-1574-1575-1576-1577-1578-1579-1580-1581-1582-1583-1584-1585-1586-1587-1588-1589-1590-1591-1592-1593-1594-1595-1596-1597-1598-1599-1600-1601-1602-1603-1604-1605-1606-1607-1608-1609-1610-1611-1612-1613-1614-1615-1616-1617-1618-1619-1620-1621-1622-1623-1624-1625-1626-1627-1628-1629-1630-1631-1632-1633-1634-1635-1636-1637-1638-1639-1640-1641-1642-1643-1644-1645-1646-1647-1648-1649-1650-1651-1652-1653-1654-1655-1656-1657-1658-1659-1660-1661-1662-1663-1664-1665-1666-1667-1668-1669-1670-1671-1672-1673-1674-1675-1676-1677-1678-1679-1680-1681-1682-1683-1684-1685-1686-1687-1688-1689-1690-1691-1692-1693-1694-1695-1696-1697-1698-1699-1700-1701-1702-1703-1704-1705-1706-1707-1708-1709-1710-1711-1712-1713-1714-1715-1716-1717-1718-1719-1720-1721-1722-1723-1724-1725-1726-1727-1728-1729-1730-1731-1732-1733-1734-1735-1736-1737-1738-1739-1740-1741-1742-1743-1744-1745-1746-1747-1748-1749-1750-1751-1752-1753-1754-1755-1756-1757-1758-1759-1760-1761-1762-1763-1764-1765-1766-1767-1768-1769-1770-1771-1772-1773-1774-1775-1776-1777-1778-1779-1780-1781-1782-1783-1784-1785-1786-1787-1788-1789-1790-1791-1792-1793-1794-1795-1796-1797-1798-1799-1800-1801-1802-1803-1804-1805-1806-1807-1808-1809-1810-1811-1812-1813-1814-1815-1816-1817-1818-1819-1820-1821-1822-1823-1824-1825-1826-1827-1828-1829-1830-1831-1832-1833-1834-1835-1836-1837-1838-1839-1840-1841-1842-1843-1844-1845-1846-1847-1848-1849-1850-1851-1852-1853-1854-1855-1856-1857-1858-1859-1860-1861-1862-1863-1864-1865-1866-1867-1868-1869-1870-1871-1872-1873-1874-1875-1876-1877-1878-1879-1880-1881-1882-1883-1884-1885-1886-1887-1888-1889-1890-1891-1892-1893-1894-1895-1896-1897-1898-1899-1900-1901-1902-1903-1904-1905-1906-1907-1908-1909-1910-1911-1912-1913-1914-1915-1916-1917-1918-1919-1920-1921-1922-1923-1924-1925-1926-1927-1928-1929-1930-1931-1932-1933-1934-1935-1936-1937-1938-1939-1940-1941-1942-1943-1944-1945-1946-1947-1948-1949-1950-1951-1952-1953-1954-1955-1956-1957-1958-1959-1960-1961-1962-1963-1964-1965-1966-1967-1968-1969-1970-1971-1972-1973-1974-1975-1976-1977-1978-1979-1980-1981-1982-1983-1984-1985-1986-1987-1988-1989-1990-1991-1992-1993-1994-1995-1996-1997-1998-1999-2000-2001-2002-2003-2004-2005-2006-2007-2008-2009-2010-2011-2012-2013-2014-2015-2016-2017-2018-2019-2020-2021-2022-2023-2024-2025-2026-2027-2028-2029-2030-2031-2032-2033-2034-2035-2036-2037-2038-2039-2040-2041-2042-2043-2044-2045-2046-2047-2048-2049-2050-2051-2052-2053-2054-2055-2056-2057-2058-2059-2060-2061-2062-2063-2064-2065-2066-2067-2068-2069-2070-2071-2072-2073-2074-2075-2076-2077-2078-2079-2080-2081-2082-2083-2084-2085-2086-2087-2088-2089-2090-2091-2092-2093-2094-2095-2096-2097-2098-2099-2100-2101-2102-2103-2104-2105-2106-2107-2108-2109-2110-2111-2112-2113-2114-2115-2116-2117-2118-2119-2120-2121-2122-2123-2124-2125-2126-2127-2128-2129-2130-2131-2132-2133-2134-2135-2136-2137-2138-2139-2140-2141-2142-2143-2144-2145-2146-2147-2148-2149-2150-2151-2152-2153-2154-2155-2156-2157-2158-2159-2160-2161-2162-2163-2164-2165-2166-2167-2168-2169-2170-2171-2172-2173-2174-2175-2176-2177-2178-2179-2180-2181-2182-2183-2184-2185-2186-2187-2188-2189-2190-2191-2192-2193-2194-2195-2196-2197-2198-2199-2200-2201-2202-2203-2204-2205-2206-2207-2208-2209-2210-2211-2212-2213-2214-2215-2216-2217-2218-2219-2220-2221-2222-2223-2224-2225-2226-2227-2228-2229-2230-2231-2232-2233-2234-2235-2236-2237-2238-2239-2240-2241-2242-2243-2244-2245-2246-2247-2248-2249-2250-2251-2252-2253-2254-2255-2256-2257-2258-2259-2260-2261-2262-2263-2264-2265-2266-2267-2268-2269-2270-2271-2272-2273-2274-2275-2276-2277-2278-2279-2280-2281-2282-2283-2284-2285-2286-2287-2288-2289-2290-2291-2292-2293-2294-2295-2296-2297-2298-2299-2300-2301-2302-2303-2304-2305-2306-2307-2308-2309-2310-2311-2312-2313-2314-2315-2316-2317-2318-2319-2320-2321-2322-2323-2324-2325-2326-2327-2328-2329-2330-2331-2332-2333-2334-2335-2336-2337-2338-2339-2340-2341-2342-2343-2344-2345-2346-2347-2348-2349-2350-2351-2352-2353-2354-2355-2356-2357-2358-2359-2360-2361-2362-2363-2364-2365-2366-2367-2368-2369-2370-2371-2372-2373-2374-2375-2376-2377-2378-2379-2380-2381-2382-2383-2384-2385-2386-2387-2388-2389-2390-2391-2392-2393-2394-2395-2396-2397-2398-2399-2400-2401-2402-2403-2404-2405-2406-2407-2408-2409-2410-2411-2412-2413-2414-2415-2416-2417-2418-2419-2420-2421-2422-2423-2424-2425-2426-2427-2428-2429-2430-2431-2432-243

1,

DEPARTMENT OF COMMERCE

51,380,000
2.
53,000,000Ys Bay.

Between Sept 1, and Oct 2, 1916, when egg taking ceased at Ys Bay, a total of 58,000,000 red salmon eggs were secured. ~~2,000,000 eyed eggs were transferred to the Bonneville Hatchery was completed on April 15, yielding a total of 51,309,000 fry. Oregon hatchery in October~~

Hatching was completed on April 15, 1917, (yielding a total of 51,309,000 fry.) From these 49,600,000 fry ~~distributed~~ and 2,375,000 fingerlings were planted in Ys River Hatchery Creek, and Lake McDonald (totals do not check). The loss of ~~4~~ eggs & fry at Ys Bay was \$0.25,000, or 7 percent.

(insert)

2.

Ys Bay

DEPARTMENT OF COMMERCE

Egg taking in 1917 began on Sept 11, and ended Sept 26. During that period 34,950,000 red salmon eggs were taken. ~~insert above.~~

On account of inadequate facilities for holding fry to the swimming stage the greater portion was liberated in the sac stage. Feeding on salt salmon began in June and continued until the supply of food was (used up) consumed.

Usual patrol of Ys Bay waters was maintained.

(Were there any humpback eggs)

Afagnak

DEPARTMENT OF COMMERCE

In 1916, the take of red salmon eggs at Afagnak was 17,054,000.

Through an error in the superintendent's reports this was entered as 17,044,000 in the 1916 report. This collection was augmented by the transfer of 681,000 eyed eggs from Uganik, 4,600,000 from Seal Bay, and 1,016,000 from Karluk. From this number there were planted in the period from October 1916 to July 1917, 10,956,000 fry and 10,160,000 red salmon fingerlings, a total of 21,116,000 young salmon.

In 1917, the red salmon spawning season began on July 30, and ended Sept 11, in which period

red-salmon fingerlings, a total of 21,116,000 young salmon.

In 1917 the red salmon spawning season began on July 30 and ended September 11, in which period 53,036,000 red salmon eggs were taken. To these were added 2,712,000 eggs taken at Seal Bay substation. In September and October, 1917, there were planted 2,712,000 eyed eggs. (Said something about not being able to hold them)

In 1916 the first humpback eggs were taken on September 1. During the period ending September 8, 300,000 eggs were taken. This take was augmented by 2,560,000 from Seal Bay and 1,273,000 from Uganik substation. (Shipments of eyed eggs were made in October as follows: 4,096,000 to Craig Brook, 4,106,752 to Green Lake, 4,000,000 to Birdview, 2,000 to Duckabush, and 2,000,000 to Quilcene, a total of 16,202,752.) In October 800,000 humpback eggs were planted in Seal Bay.

Uganik.

In 1917 no red-salmon eggs were collected, but 1,273,000 humpback eggs were taken from August 14 to September 16. These were transferred to Afognak and used in making up the shipments to the States.

Seal Bay.

In 1917 the taking of red-salmon eggs began August 8 and ended August 29, a total of 2,712,000 being secured. Humpback eggs to the number of 2,560,000 were secured between August 24 and September 14. (These eggs were all transferred to the Afognak station.)

FORTMANN.

The Fortmann hatchery is operated on Heckman Lake, near Loring, Alaska, by the Alaska Packers Association. It is the largest hatchery in Alaska, having a capacity of approximately 110,000,000 red salmon eggs. The take of eggs in 1917 was the smallest since the beginning of operations in 1901, only 6,840,000 eggs being secured. This small take is due in great measure to the excessive rainfall, over 100 inches between July 1 and

The loss of eggs and fry was 2,235,000, or approximately 9 1/2 per cent.

These eggs were held until eyed and then planted in the lake at Seal Bay, in order that the

water might be deep and the river returned to normal before starting weather set in.

red-salmon fingerlings, a total of 21,116,000 young salmon. The loss of eggs and fry was 2,235,000, or approximately $9\frac{1}{2}$ per cent.

In 1917 the red salmon spawning season begun on July 30 and ended September 11, in which period 53,036,000 red salmon eggs were taken. To these were added 2,712,000 eggs taken at Seal Bay substation. In September and October, 1917, there were planted 2,712,000 eyed eggs. (Said something about not being able to hold them)

In 1916 the first humpback eggs were taken on September 1. During the period ending September 8, 300,000 eggs were taken. This take was augmented by 2,560,000 from Seal Bay and 1,253,000 from Uganik substation. In October 800,000 humpback eggs were planted in the lake and stream at Seal Bay.

Uganik.

In 1917 no red-salmon eggs were collected, but 1,253,000 humpback eggs were taken from August 14 to September 16. These were transferred to Afognak.

Seal Bay.

In 1917 the taking of red-salmon eggs began August 8 and ended August 29, a total of 2,712,000 being secured. Humpback eggs to the number of 2,560,000 were secured between August 24 and September 14. (These eggs were all transferred to the Afognak station.) These eggs were held until eyed and then planted in the lake at Seal Bay, in order that the station might be closed and the crew returned to Afognak before stormy weather set in.

FORTMANN.

The Fortmann hatchery is operated on Heckman Lake, near Loring, Alaska, by the Alaska Packers Association. It is the largest hatchery in Alaska, having a capacity of approximately 110,000,000 red salmon eggs. The take of eggs in 1917 was the smallest since the beginning of operations in 1901, only 6,840,000 eggs being secured. This small take is due

Operations of Alaska Hatcheries in 1917.

Stations	Red or sockeye salmon eggs taken in 1916	Red or sockeye salmon like erated in 1916-17	Red or sockeye salmon eggs taken in 1917.
Yes Bay ✓	58,000,000	51,975,000	34,950,000
Afognak.	17,044,000 18,070,000	c ✓ 21,356,000	53,036,000
Uganik	692,000	— — —	— — —
Seal Bay	4,678,000	— — —	2,712,000
Karluk.	1,016,000	— — —	— — —
Fortmann.	62,580,000	57,405,000	6,840,000
Quadr	16,125,000	15,003,000	13,600,000
Huta	3,271,000	3,120,000	4,244,000
Klawak	8,160,000	report not found 7,825,000	— — —
	171,546,000	156,644,000	115,382,000

~~7, incorrectly reported as 17,044 in 1916 statistics~~
 includes 1,016,000^{eggs} transferred from Karluk hatchery in August, 1916, after that hatchery was closed.

* 2,000,000 eyed eggs transferred to ^{the} Bonnevillie Creg in October.

c, includes young salmon resulting from eggs received from Uganik, Seal Bay and Karluk.

red-salmon fingerlings, a total of 21,116,000 young salmon. The loss of eggs and fry was 2,2²~~3~~5,000, or approximately 9 $\frac{1}{2}$ per cent.

In 1917 the red salmon spawning season begun on July 30 and ended September 11, in which period 53,036,000 red salmon eggs were taken. To these were added 2,712,000 eggs taken at Seal Bay substation. In September and October, 1917, there were planted 2,712,000 eyed eggs. ~~(Said something about not being able to hold them)~~

In 1916 the first humpback eggs were taken on September 1. During the period ending September 8, 300,000 eggs were taken. This take was augmented by 2,560,000 from Seal Bay and 1,253,000 from Uganik substation. In October 800,000 humpback eggs were planted in the lake and stream at Seal Bay.

Uganik.

In 1917 no red-salmon eggs were collected, but 1,253,000 humpback eggs were taken from August 14 to September 16. These were transferred to Afognak.

Seal Bay.

In 1917 the taking of red-salmon eggs began August 8 and ended August 29, a total of 2,712,000 being secured. Humpback eggs to the number of 2,560,000 were secured between August 24 and September 14. ~~(These eggs were all transferred to the Afognak station.)~~ These eggs were held until eyed and then planted in the lake at Seal Bay, in order that the station might be closed and the crew returned to Afognak before stormy weather set in.

FORTMANN.

The Fortmann hatchery is operated on Heckman Lake, near Loring, Alaska, by the Alaska Packers Association. It is the largest hatchery in Alaska, having a capacity of approximately 110,000,000 red salmon eggs. The take of eggs in 1917 was the smallest since the beginning of operations in 1901, only 6,840,000 eggs being secured. This small take is due

in great measure to the excessive rainfall, over 100 inches between July 1 and November 30, which made it almost impossible to take the spawning fish.

Egg taking operations extended from September 3 to October 20.

From the 62,580,000 red salmon eggs taken in 1916 there were planted 57,405,000 fry. The loss was 5,175,000, or 8.27 per cent.

In 1917, from September 3 to October 9, 2,400,000 humpback salmon eggs were taken for experimental purposes.

Quadra.

This hatchery is located at Quadra, in southeastern Alaska, and is owned and operated by the Northwestern Fisheries Company. Its capacity is about 21,000,000 red salmon eggs. In 1916 the taking of eggs began August 9 and ended November 19. The total take was 16,125,000. Between November 27, 1916, and June 30, 1917, there were liberated 15,003,000 red salmon fry. The loss was 1,122,000 eggs, or 6.9 per cent.

In 1917 the taking of eggs began August 13, and ended November 3. The total take of red salmon eggs was 13,600,000. (~~confirmation report still to come.~~)

Hetta.

This hatchery is also owned and operated by the Northwestern Fisheries Company. It is located on Hetta Lake near the southern end of Prince of Wales Island, southeastern Alaska. Its capacity is about 12,000,000 red salmon eggs. In 1916 the take of eggs between August 21, and December 20 was 3,271,000. In the period between August 21, 1916 and June 30, 1917, there were liberated 3,120,000 red salmon fry. The loss was 127,000/000, or 3.9 per cent.

In 1917 the taking of eggs began August 15 and ended December 14. The total take of red salmon eggs was 4,826,000. (~~Confirmation report still to come.~~)

Klawak.

The Klawak hatchery is operated by the North Pacific Trading & Packing Company and is located on a lake a few miles above Klawak on the west coast of Prince of Wales Island, southeastern Alaska. Its capacity is approximately 10,000,000 red salmon eggs. In 1916 the total take of eggs was 8,160,000, obtained in the period from July 20 to September 26. From these there were liberated 7,826,000 red salmon fry between September 26, 1916, and February 16, 1917. The loss was therefore 334,000, or 4.1 per cent.

$$\begin{array}{r} 8,160,000 \text{) } 334,000 \text{ (4.1\%} \\ \underline{3264} \\ 1160 \\ \underline{816} \\ 344 \\ \underline{48} \end{array}$$